

a moderate localized reaction to a drug, that specific drug should not be reused. Another non-cross-reacting drug should be chosen. After informed consent has been obtained and preparations made to treat any severe adverse reaction, titration intradermal skin testing may be used, with subsequent subcutaneous challenge using increasing amounts until from 0.5 to 1.0 ml is safely administered. There is disagreement as to the validity of skin testing in diagnosing or predicting immediate reactions. However, no one would disagree that it is still useful as a challenge technique. In recent studies, positive test results to anesthetics to which patients had not been previously exposed did not deter the authors from challenge, and no adverse reactions were encountered. In obvious toxic or vasovagal responses, or in reactions of questionable severity, the reuse of that agent will depend on the physician's confidence regarding the diagnosis.

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#### REFERENCES

- Incaudo G, Shatz M, Patterson R, et al: Administration of local anesthetics to patients with a history of prior adverse reaction. *J Allergy Clin Immunol* 61:339-345, May 1978  
 Aldrete JA, Johnson DA: Evaluation of intracutaneous testing for investigation of allergy to local anesthetic agents. *Anesth Analg* 49:173-183, Jan-Feb 1970  
 Luebke NH, Walker JA: Discussion of sensitivity to preservatives in anesthetics. *J Am Dent Assoc* 97:656-657, Oct 1978

## Intravenous Radiocontrast Dye Reactions

ADVERSE REACTIONS to radiocontrast dyes (RCD) can range from innocuous vasomotor symptoms and rashes to life-threatening anaphylactoid reactions. The incidence of anaphylactoid reactions (any immediate reaction, whether urticaria or shock) after RCD has been reported at less than 2 percent, and the resultant mortality from one in 40,000 to one in 116,000 patients examined, or an estimated annual mortality of 500 patients. The mechanism for such reactions is unknown, but activation of the complement system, inactivation of enzyme systems, hyperosmolarity and antigen-antibody complexes have been suggested as possible explanations. The classic IgE-mediated anaphylactic mechanism has not been found. However, it is well established that RCD can release histamine both *in vivo* and *in vitro* from basophils and mast cells.

Initial studies using prophylactic antihistamines to avert the immediate reactions showed a decrease in the frequency and severity of reactions. More recent studies indicated that pretreatment with both steroids and antihistamines was suc-

cessful in preventing serious reactions when the dyes were readministered to those who had had previous severe reactions. The risk of another anaphylactoid reaction in RCD-sensitive patients is unknown because patients may or may not react on subsequent exposure. Intravenous pretesting has been advocated to detect those patients who are at greatest risk for repeated serious reactions. However, intravenous pretesting has inherent risks, and its reliability has been disputed. Nevertheless, some practical guidelines for the management of RCD-reactive patients should be followed:

- After the physicians involved agree that the risk/benefit ratio supports the study, the patient should sign an informed consent in which the risks, options and potential benefits of the planned procedure are explained.
- Premedication with diphenhydramine (50 mg given intramuscularly) an hour before the study and prednisone (50 mg orally or equivalent parenteral dose) every six hours starting 18 hours before the procedure is indicated.
- A free-flowing intravenous line plus resuscitation equipment should be available to guard against the possibility of a serious reaction in spite of premedication.

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#### REFERENCES

- Kelley JF, Patterson R, Lieberman P, et al: Radiographic contrast media studies in high-risk patients. *J Allergy Clin Immunol* 62:181-184, Sep 1978  
 Liberman P, Siegle RL, Taylor WW: Anaphylactoid reactions to ioginated contrast material. *J Allergy Clin Immunol* 63:174-180, Sep 1978  
 Yocum MW, Heller AM, Abels RI: Efficacy of intravenous pretesting and antihistamine prophylaxis in radiocontrast media-sensitive patients. *J Allergy Clin Immunol* 62:309-313, Nov 1978

## Asthma and Sports

CAN MOST ASTHMATIC YOUNGSTERS participate in active sports? Yes. The attitude held by many parents, school instructors, coaches, counselors and even some physicians which prevents the asthmatic from participating in physical exercise should be changed.

Exercise-induced asthma or bronchospasm (EIA and EIB, respectively) classically occurs in a person during a rest period after exertion of at least five minutes, and may last as long as two hours. It occurs in nearly all asthmatic persons and in approximately 40 percent of those who have only allergic rhinitis or hayfever. The symptoms may include dyspnea, wheeze, chest tightness, increased mucus production, cough, choking or fatigue. Because of these restrictive symptoms persons with asthma are often told to modify their